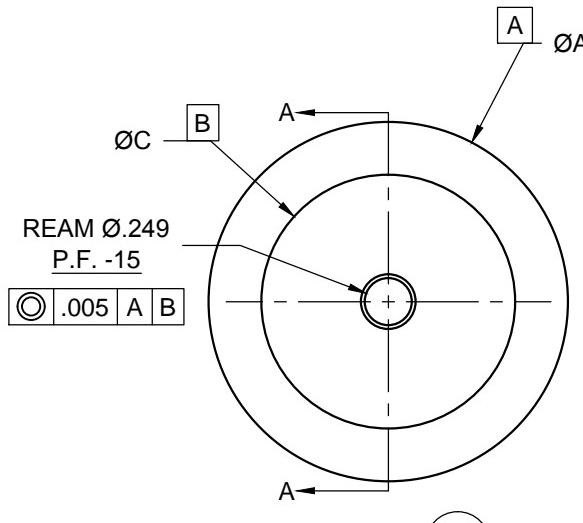


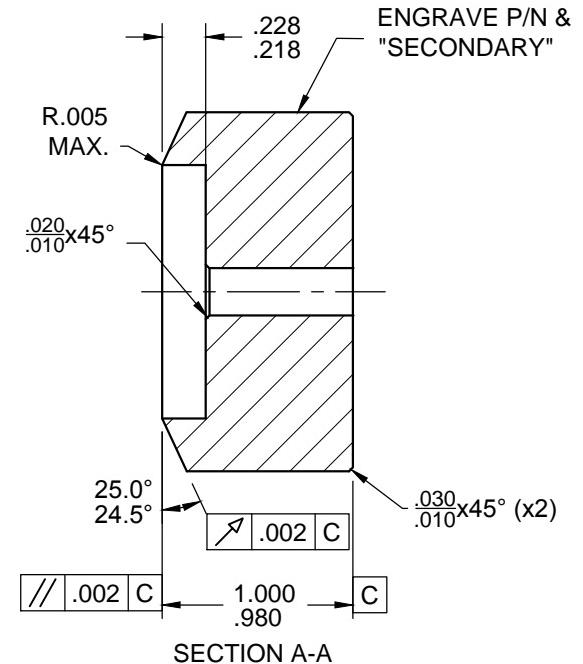
## NOTES

- #### 1. BREAK ALL SHARP CORNERS (.015/.03).

 RED BARN MACHINE	
<b>TITLE</b> KSTHA SERIES DP TRI-ROLLER SWAGING TOOLS FOR BACB10HA BEARINGS	
<b>DWG NO.</b>	( <b>TOOL#</b> ) -15 LOCATING PIN
<b>REV</b> 1	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	
<b>TOLERANCES ON:</b> DECIMALS .XXX ± .005 FRACTIONS ± 1/32 .XX ± .01 ANGLES ± 5° X ± .1	
<b>DRAWN BY:</b> PERRITT <b>APPROVED</b> <b>HEAT TREAT</b> <b>FINISH SPEC</b> BLACK OXIDE <b>USED ON BEARING</b> <b>SEE Pg. 1</b>	
UNLESS OTHERWISE SPECIFIED 1. BREAK ALL SHARP EDGES .015 X 45° PR. .015 R 2. DIMENSIONAL LIMITS APPLY AFTER PLATING	
<b>SCALE</b>	NTS
<b>DATE</b>	6-3-08
<b>SHEET</b> 9 of 9	



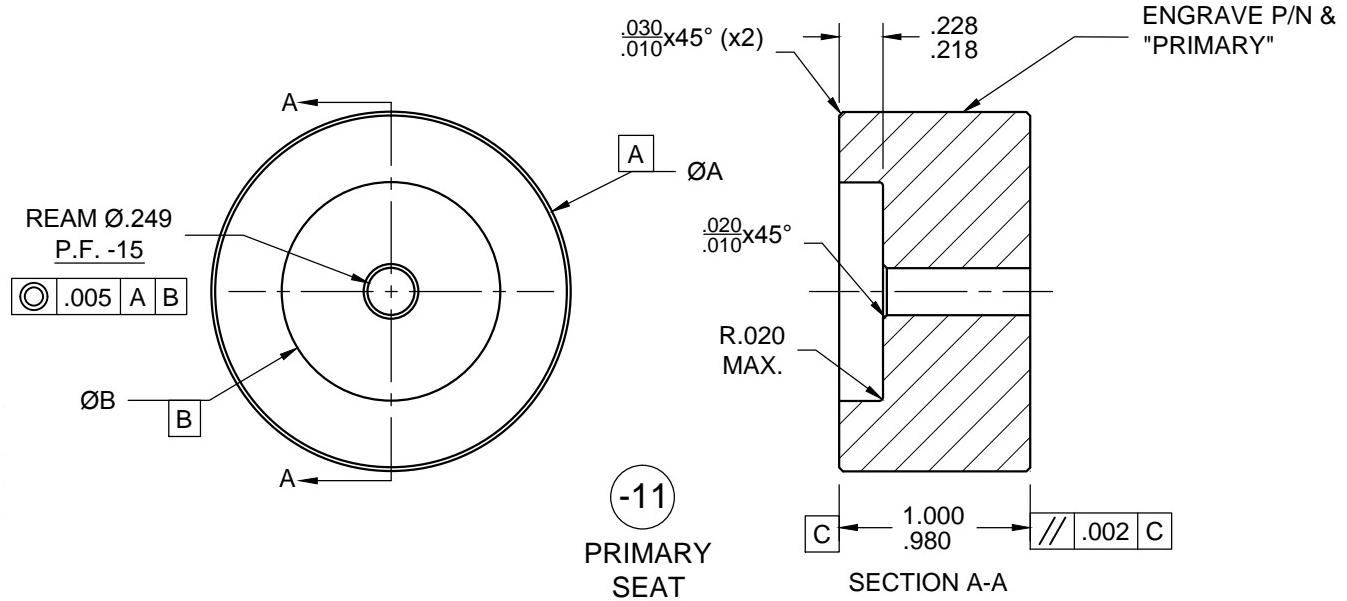
**SECONDARY  
SEAT**



## NOTES

- #### **1. BREAK ALL SHARP CORNERS (.015/.03).**

RB		RED BARN MACHINE	
<b>TITLE</b> KSTHA SERIES DP TRI-ROLLER SWAGING TOOLS FOR BACB10HA BEARINGS			
<b>DWG NO.</b> (TOOL#) -13 SECONDARY SEAT		<b>REV</b> 1	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON: DECIMALS $.XXX \pm .005$ $XX \pm .01$ $X \pm .1$		DRAWN BY: PERRITT APPROVED HEAT TREAT FINISH SPEC BLACK OXIDE USED ON BEARING SEE Pg. 1	
UNLESS OTHERWISE SPECIFIED 1. BREAK ALL SHARP EDGES $.015 \times 45^\circ$ PR. 015 R. 2. DIMENSIONAL LIMITS APPLY AFTER PLATING			
<b>SCALE</b>	NTS	<b>DATE</b>	6-3-08
		<b>SHEET</b>	8 of 9

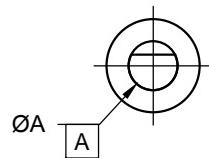


**PRIMARY  
SEAT**

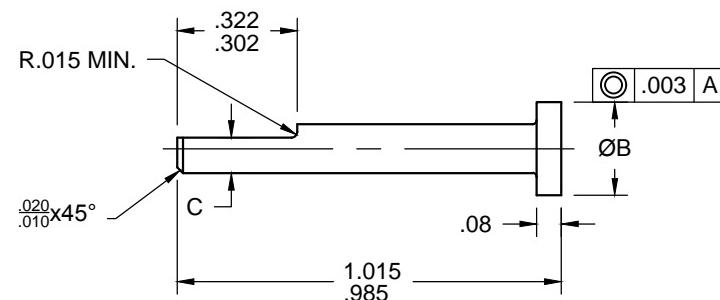
-1

## NOTES

RB		RED BARN MACHINE		
TITLE KSTHA SERIES DP TRI-ROLLER SWAGING TOOLS FOR BACB10HA BEARINGS				
DWG NO.	(TOOL#) -11 PRIMARY SEAT			REV 1
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON: DECIMALS .XXX ± .005 .XX ± .01 .X ± .1		DRAWN BY: PERRITT APPROVED HEAT TREAT FINISH SPEC BLACK OXIDE USED ON BEARING SEE Pg. 1		
UNLESS OTHERWISE SPECIFIED 1. BREAK ALL SHARP EDGES .015 x 45° PR. 015 R 2. DIMENSIONAL LIMITS APPLY AFTER PLATING				
SCALE	NTS	DATE	6-3-08	SHEET 7 of 9



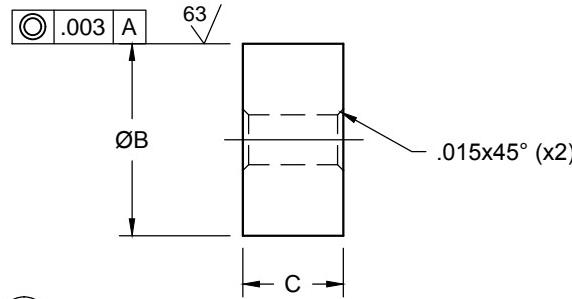
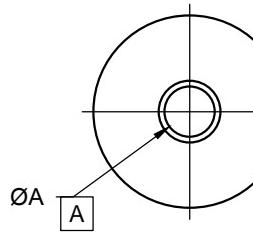
-9  
PIN



## NOTES

- #### NOTES

 RED BARN MACHINE	
TITLE KSTHA SERIES DP TRI-ROLLER SWAGING TOOLS FOR BACB10HA BEARINGS	
DWG NO.	(T <del>OOL</del> #) - 9 PIN
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	
TOLERANCES ON: DECIMALS .XXX ± .005    FRACTIONS ± 1/32 .XX ± .01                    ANGLES ± 5°	
HEAT TREAT FINISH SPEC BLACK OXIDE	
USED ON BEARING	
SEE Pg. 1	
SCALE	NTS
DATE	6-3-08
SHEET	6 of 9



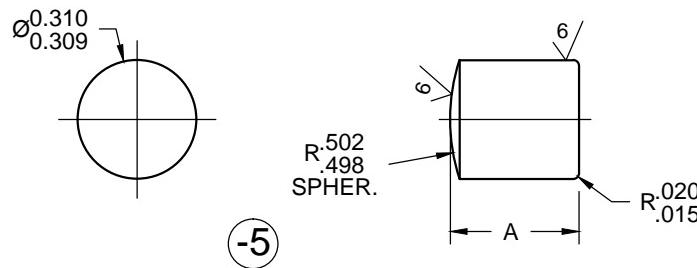
-7

## GUIDE

## NOTES

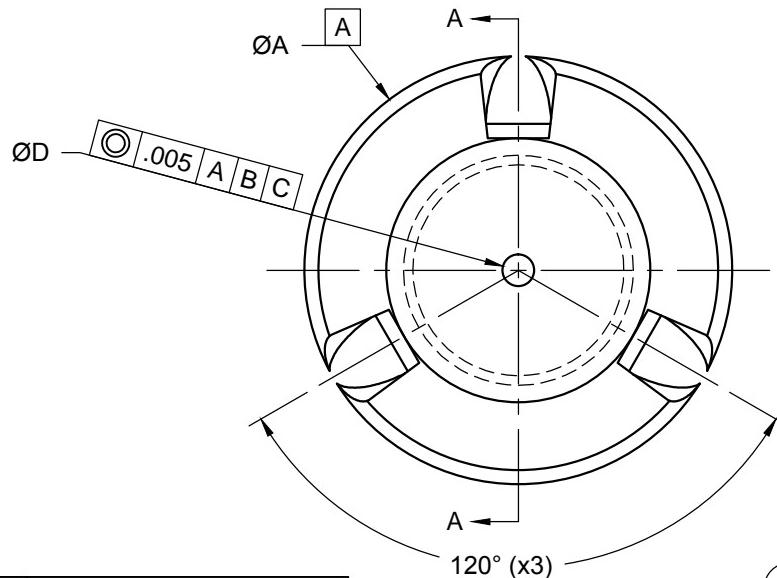
- ### **1. BREAK ALL SHARP CORNERS (.015/.03).**

RB		RED BARN MACHINE		
TITLE KSTHA SERIES DP TRI-ROLLER SWAGING TOOLS FOR BACB10HA BEARINGS				
DWG NO. (TOOL#) -7 GUIDE				REV 1
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON: DECIMALS .XXX ± .005 .XX ± .01 .X ± .1		DRAWN BY: PERRITT APPROVED HEAT TREAT FINISH SPEC USED ON BEARING SEE Pg. 1		
UNLESS OTHERWISE SPECIFIED 1. BREAK ALL SHARP EDGES .015 x 45° PR. 015 R 2. DIMENSIONAL LIMITS APPLY AFTER PLATING				
SCALE	NTS	DATE	6-3-08	SHEET 5 of 9



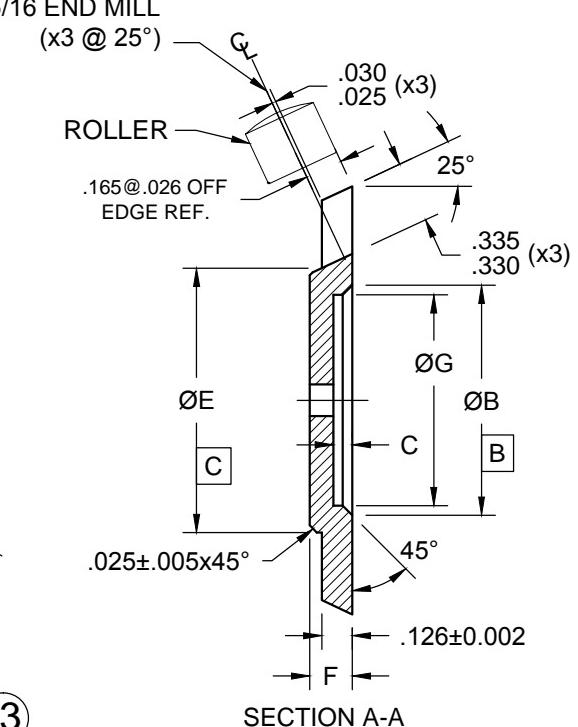
## ROLLER

RB		RED BARN MACHINE	
<b>TITLE</b> KSTHA SERIES DP TRI-ROLLER SWAGING TOOLS FOR BACB10HA BEARINGS			
DWG NO.	(TOOL#) -5 ROLLER (QTY. 3)		REV 1
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		DRAWN BY: PERRITT APPROVED	
TOLERANCES ON: DECIMALS .XXX ± .005 .XX ± .01 X ± .1		FRACTIONS ± 1/32 ANGLES ± .5° HEAT TREAT FINISH SPEC	
UNLESS OTHERWISE SPECIFIED 1. BREAK ALL SHARP EDGES .015 x 45° PR. 015 R 2. DIMENSIONAL LIMITS APPLY AFTER PLATING		USED ON BEARING SEE Pg. 1	
SCALE	NTS	DATE	6-3-08
		SHEET	4 of 9



-3

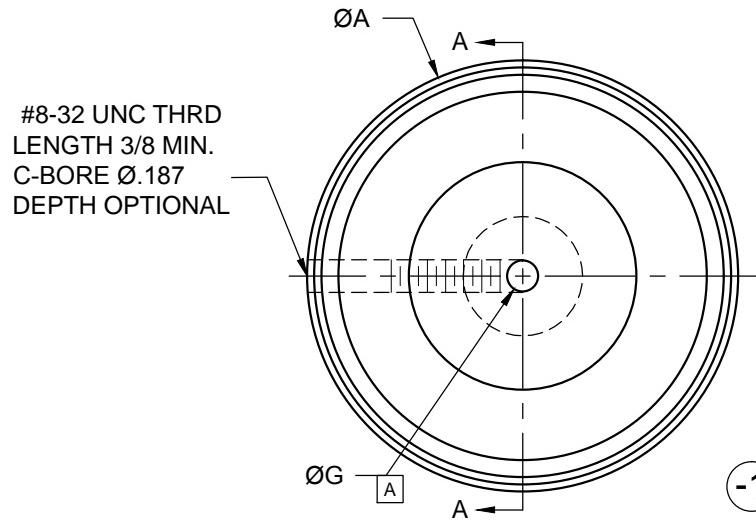
## RETAINER



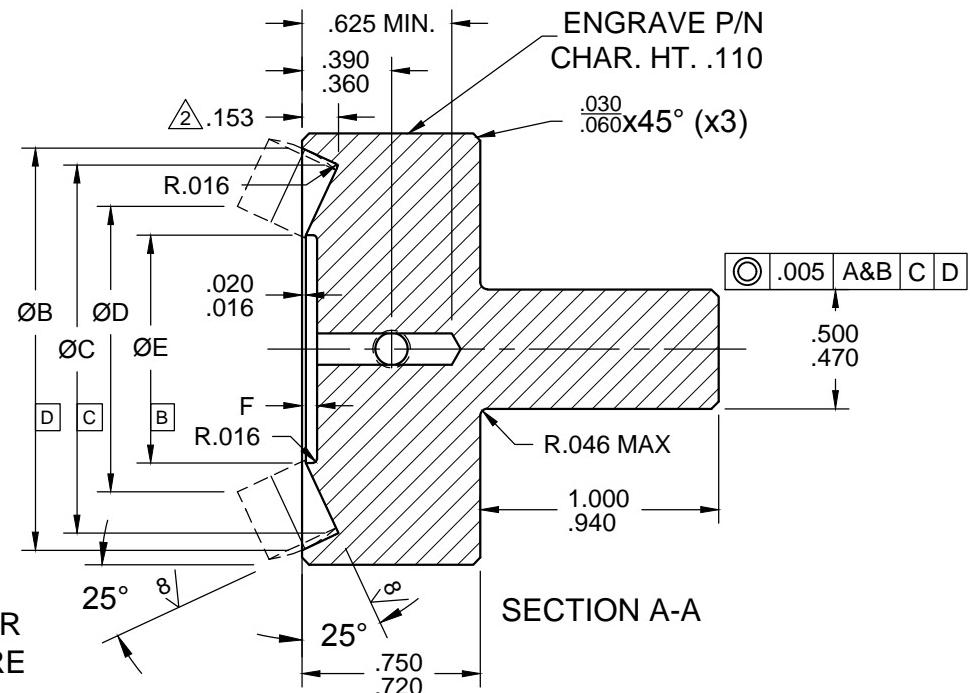
## NOTES

- #### 1. BREAK ALL SHARP CORNERS (.015/.03).

 RED BARN MACHINE	
<b>TITLE</b> KSTHA SERIES DP TRI-ROLLER SWAGING TOOLS FOR BACB10HA BEARINGS	
<b>DWG NO.</b>	( <b>TOOL #</b> ) -3 · RETAINER
	<b>REV</b> 1
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	
TOLERANCES ON: DECIMALS	
.XXX ± .005	FRACTIONS ± 1/32
.XX ± .01	ANGLES ± .5°
X ± .1	
UNLESS OTHERWISE SPECIFIED 1. BREAK ALL SHARP EDGES .015 x 45° PR. .015 R	
2. DIMENSIONAL LIMITS APPLY AFTER PLATING	
DRAWN BY: PERRITT APPROVED HEAT TREAT FINISH SPEC	
USED ON BEARING	
SEE Pg. 1	
<b>SCALE</b>	NTS
<b>DATE</b>	6-3-08
<b>SHEET</b> 3 of 9	



#8-32 UNC THRD  
LENGTH 3/8 MIN.  
C-BORE Ø.187  
DEPTH OPTIONAL



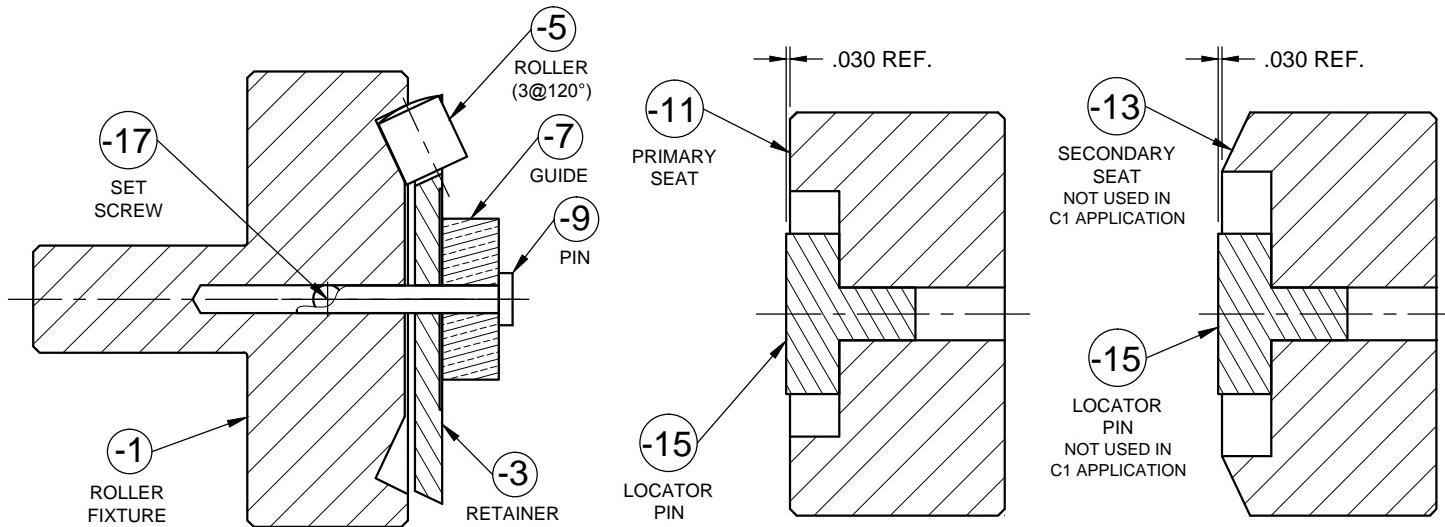
## ROLLER FIXTURE

## NOTES

- NOTE

  1. BREAK ALL SHARP CORNERS (.015/.03).  
② DIMENSION TO BOTTOM OF R.016=.153;  
DIMENSION TO SHARP CORNER=.158.
  3. -1 BEARING RACE SURFACES MUST HAVE  
SMOOTH APPEARANCE, FREE FROM  
MACHINING MARKS AND GROOVES.
  4. DO FIRST ARTICLE INSPECTION  
BEFORE HEAT TREATING.

REVISIONS				
REV	DESCRIPTION	DATE	INITIAL	APPROVED
1	CHANGED -5 ROLLER RADUIS FROM .005 -.010, TO .015 -.020; AND -9 PIN RADIUS FROM .015 MAX., TO .015 MIN. ALSO CHANGED -7 SLEEVE TO -7 GUIDE.	7/7/08	WP	DW



## NOTES

1. -5 ROLLERS MUST TURN FREELY IN -3 RETAINER POCKETS.
  2. -5 ROLLERS & -3 RETAINER MUST TURN FREELY WHEN TOOL IS COMPLETELY ASSEMBLED.
  3. FLAT END OF ROLLERS MUST FACE TOWARDS THE CENTER OF THE TOOL WHEN ASSEMBLED.
  4. BEARING CODE 1 (c1) MEANS THAT -13 SECONDARY SEAT AND 1 OF THE -15 PINS ARE NOT USED. BEARING CODE 2 (c2) MEANS ALL ARE USED.

ASSY QTY	B/O	PART #	UNIT QTY	DESCRIPTION	B/O INFORMATION OR SPECIFICATIONS
		-1	1	ROLLER FIXTURE	SEE CHART
		-3	1	RETAINER	SEE CHART
		-5	3	ROLLER	SEE CHART
		-7	1	GUIDE	SEE CHART
		-9	1	PIN	SEE CHART
		-11	1	PRIMARY SEAT	SEE CHART
		-13	SEE CHART	SECONDARY SEAT	SEE CHART
		-15	SEE CHART	LOCATING PIN	SEE CHART
B/O		-17	1	SOCKET HEAD SET SCREW	#8-32 x 1/4

g.		TITLE			RED BARN MACHINE		
		KSTHA SERIES DP TRI-ROLLER SWAGING TOOLS					
		FOR BACB10HA BEARINGS					
2		DWG NO.			REV		
3		(SEE TOOL# ABOVE); ASSEMBLY			1		
4		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES			DRAWN BY: PERRITT		
5		TOLERANCES ON:			APPROVED		
6		DECIMALS			HEAT LISTED PER ITEM		
7		XXX $\pm$ .005	FRACTIONS $\pm$ 1/32	ANGLES $\pm$ .5°	TREAT	ITEM	
8		XX $\pm$ .01			FINISH	LISTED PER ITEM	
9		X $\pm$ .1			SPEC		
I/S		UNLESS OTHERWISE SPECIFIED 1. BREAK ALL SHARP EDGES 015 X 45° PR. 015 R 2. DIMENSIONAL LIMITS APPLY AFTER PLATING			USED ON BEARING SEE ABOVE		
I/S		SCALE	NTS	DATE	6-3-08	SHEET	1 of 9

ASSY QTY	ASSY QTY	B/O	PART #	UNIT QTY	DESCRIPTION	MAT.	B/O INFORMATION OR SPECIFICATIONS
			-1	1	RND	6061	Ø8-1/4 x 3-7/8
ASSY #							

REVISIONS					
REV	DESCRIPTION	DATE	INITIAL	APPR	
—	—	—	—	—	—

**NOT APPROVED FOR PRODUCTION**

**APPROVED FOR PRODUCTION**

DESCRIPTION	MAT.	B/O INFORMATION OR SPECIFICATIONS	Pg.
	6061	Ø8-1/4 x 3-7/8	2

**RED BARN MACHINE**

TITLE	
— —	
DWG NO.	RE
— —	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON: DECIMALS XXX $\pm$ .005      FRACTIONS $\pm$ 1/32 XX $\pm$ .01      ANGLES $\pm$ 5° X $\pm$ .1	DRAWN BY: PERRITT APPROVED HEAT FREIGHT SPEC
— —	
UNLESS OTHERWISE SPECIFIED	
USED ON MODEL	

 RED BARN MACHINE	
TITLE	
DWG NO.	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON: DECIMALS $.XXX \pm .005$ FRACTIONS $\pm 1/32$ $.XX \pm .01$ ANGLES $\pm .5^\circ$ $X \pm .1$	
DRAWN BY: PERRITT APPROVED HEAT TREAT FINISH SPEC	
USED ON MODEL 1. BREAK ALL SHARP EDGES $.015 \times 45^\circ$ PR. .015 R 2. DIMENSIONAL LIMITS APPLY AFTER PLATING	
SCALE	NTS
DATE	8-15-07
SHEET	1 of

NOT APPROVED FOR PRODUCTION

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED

PART #	QTY	DESCRIPTION
-1	1	--

DRAWN BY:	PERRITT	RB RED BARN MACHINE
CHECKED		
HEAT		
TREAT		
FINISH		
SPEC		
USED ON MODEL	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	
?	TOLERANCES ON: DECIMALS .XXX ± .005      FRACTIONS ± 1/32 .XX ± .01      ANGLES ± 5° .X ± .1	
	UNLESS OTHERWISE SPECIFIED 1. BREAK ALL SHARP EDGES 0.015 x 45° PR. 0.015 R 2. DIMENSIONAL LIMITS APPLY AFTER PLATING	
DWG NO.	TITLE	
SCALE	NTS	DATE 1-28-06
		SHEET 1 of 1

